

WHAT IS CLAIMED IS:

1. An optical fiber cable comprising:
a slotted core comprising a plurality of slots; and
an identification member disposed in a designated one of the plurality of slots for
identifying cable information.
2. The optical fiber cable according to claim 1, wherein the plurality of slots formed in
the slotted core have continuous and smooth loci over the entire slotted core length.
3. The optical fiber cable according to claim 1, wherein a plurality of the identification
members are disposed in the designated slot.
4. The optical fiber cable according to claim 3, wherein the plurality of identification
members are arranged at intervals over the entire cable length.
5. The optical fiber cable according to claim 3, wherein a plurality of the identification
members are also arranged in a second designated slot of the plurality of slots.
6. The optical fiber cable according to claim 3, wherein the plurality of slots have
continuous and smooth loci over the entire slotted core length, wherein the identification
members are arranged at intervals over the entire cable length.

7. The optical fiber cable according to claim 6, wherein the identification members are arranged at intervals over the entire cable length.

8. The optical fiber cable according to claim 3, further comprising:
a pair of induction wires disposed in the designated one of the plurality of slots, each comprising parallel parts, with two insulated conductors arranged parallel to each other, arranged at intervals over the entire cable length.

9. The optical fiber according to claim 8, wherein individual parallel parts of the respective induction wires are arranged adjacent to individual ones of the identification members arranged at intervals over the entire cable length.

10. The optical fiber according to claim 9, wherein the parallel parts and the identification members exchange signals with each other.

11. The optical fiber cable according to claim 8, wherein the pair of induction wires further comprise twist parts, formed with a pair of two insulated conductors twisted with each other, arranged between the parallel parts.

12. The optical fiber cable according to claim 1, wherein the identification member comprises a radio frequency identification (RFID) chip.

13. The optical fiber cable according to claim 1, wherein the RFID chip comprises a magnetic core and antenna coil arranged within a case.

14. The optical fiber cable according to claim 1, wherein the plurality of slots are arranged in a unidirectional helical direction.

15. The optical fiber cable according to claim 1, wherein the plurality of slots are arranged in an alternating SZ helical direction.

16. The optical fiber cable according to claim 1, wherein the identification member is retained in the designated one of the plurality of slots by an adhesive material.

17. The optical fiber cable according to claim 4, wherein the intervals between respective ones of the plurality of identification members are constant.

18. A method of manufacturing an optical fiber cable, comprising:
preparing a slotted core with a plurality of slots having continuous and smooth loci over the entire slotted core length;
detecting an angular position of a designated one of the plurality of slots at various axial positions of the optical fiber cable; and
feeding a first identification member into the designated slot at a first axial position when the detected angular position matches a predetermined value.

19. The method according to claim 18, wherein the predetermined value is 0°.
20. The method according to claim 18, further comprising:
feeding a second identification member into the designated slot at a second axial position different from the first axial position when the detected angular position again matches the predetermined value.
21. The method according to claim 20, wherein the predetermined value is 0°.
22. The method according to claim 20, further comprising:
forming a pair of induction wires, formed with a pair of insulated conductors parallel to each other, with a plurality of parallel parts at intervals along its length; and
guiding the pair of induction wires in the designated slot; wherein
first and second parallel parts of the plurality of parallel parts are arranged adjacent to the first and second axial positions of the optical fiber, respectively.
23. The method according to claim 22, wherein the predetermined value is 0°.
24. The method according to claim 18, wherein the plurality of slots are arranged in a unidirectional helical direction.
25. The method according to claim 18, wherein the plurality of slots are arranged in an alternating SZ helical direction.

26. The method according to claim 18, further comprising detecting an angular position of a second designated one of the plurality of slots to feed additional identification members thereto.

27. The method according to claim 18, further comprising applying an adhesive to the first identification member to fix it in the designated slot at the first axial position.

28. Facilities for manufacturing an optical fiber cable, comprising:

a detector configured to detect an angular position of a designated one of a plurality of slots arranged on a slotted core of an optical cable at various axial positions of the optical cable, with the slots having continuous and smooth loci over the entire slotted core length; and

a first feeder configured to feed a first identification member into the designated slot at a first axial position when the detected angular position matches a predetermined value.

29. The facilities according to claim 28, wherein the predetermined value is 0° .

30. The facilities according to claim 28, wherein the first feeder is also configured to feed a second identification member into the designated slot at a second axial position different from the first axial position when the detected angular position again matches the predetermined value.

31. The facilities according to claim 30, wherein the predetermined value is 0° .

32. The facilities according to the claim 30,
further comprising a revolver configured to feed a pair of induction wires into the designated slot, wherein
the pair of induction wires comprise a pair of induction wires formed with a pair of insulated conductors parallel to each other, with a plurality of parallel parts at intervals along its length; and
first and second parallel parts of the plurality of parallel parts are arranged adjacent to the first and second axial positions of the optical fiber, respectively.

33. The facilities according to claim 32, wherein the predetermined value is 0°.

34. The facilities according to claim 28, wherein the plurality of slots are arranged in a unidirectional helical direction.

35. The facilities according to claim 28, wherein the plurality of slots are arranged in an alternating SZ helical direction.

36. The facilities according to claim 28, wherein the detector is also configured to detect an angular position of a second designated one of the plurality of slots to feed additional identification members thereto.

37. The facilities according to claim 28, further comprising:

a second feeder configured to inject an adhesive to the first identification member in the designated slot, for securely fixing the identification member therein.